

CLAIMS

What is claimed is:

1. An apparatus comprising:
a body having:
first and second faces;
an inboard surface bounding a central aperture;
an outboard perimeter;
an array of bolt holes between the first and second faces;
a channel inboard of the bolt holes;
at least one first port outboard of the inboard surface in communication with the channel; and
at least one second port in the inboard surface in communication with the channel.
2. The apparatus of claim 1 wherein:
the first port is in the perimeter.
3. The apparatus of claim 1 wherein:
the channel is in the first face.
4. The apparatus of claim 3 wherein:
the at least one second port comprises a plurality of recesses in an inboard rim of the channel.
5. The apparatus of claim 1 wherein:
the at least one second port comprises a plurality of full holes in the inboard surface.
6. The apparatus of claim 1 wherein:
the at least one second port is positioned so that the introduction of a pressurized fluid into the channel through the first port produces a plurality of discharge streams from the at least one second port at least partially radially inward from the inboard surface.
7. The apparatus of claim 1 wherein:
the body is a unitary metal member;

the channel is a full annulus; and
there are at least four such second ports circumferentially distributed about the inboard surface.

8. The apparatus of claim 1 wherein:
there are at least 8 such bolt holes.
9. The apparatus of claim 1 in combination with a flow of gas through the channel and entering the apparatus through the first port and exiting the apparatus through the second port.
10. The apparatus of claim 1 in combination with:
a mating flange having a first surface in facing relation to the first face of the metal body; and
a plurality of bolts, each of which extends through an associated one of the bolt holes.
11. The apparatus of claim 1 in combination with:
a furnace having a furnace wall separating a furnace exterior from a furnace interior and having a wall aperture;
a soot blower outlet assembly positioned to direct a soot blower gas flow through the wall aperture;
one or more soot blower gas conduit portions along a soot blower gas flowpath to the soot blower outlet assembly, the apparatus also being positioned along the soot blower gas flowpath.
12. The combination of claim 11 wherein:
the soot blower outlet assembly extends at least partially through the furnace wall.
13. A method for cleaning a surface within a vessel, the vessel having a wall with an aperture therein, the method comprising:
for a plurality of cycles:
introducing fuel and oxidizer to a conduit; and
initiating a reaction of the fuel and oxidizer so as to cause a shockwave to impinge upon the surface; and
at least between said cycles introducing a pressurized gas to the conduit effective to

substantially resist upstream infiltration of a contaminate from the vessel interior.

14. The method of claim 13 wherein:

the reaction of the fuel/oxidizer mixture comprises a deflagration-to-detonation transition.

15. The method of claim 13 wherein:

the gas comprises in major portion air.

16. The method of claim 13 wherein:

the gas is introduced through a gas port in a downstreammost 20% of a flowpath length within the conduit.